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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/513,015	02/25/2000	Robert J. Block	83000.1135;P4722/ARG	7018

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EXAMINER

PRIETO, BEATRIZ

ART UNIT PAPER NUMBER

2142

DATE MAILED: 02/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/513,015

Applicant(s)

BLOCK ET AL

Examiner

B. Prieto

Art Unit

2142

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 14-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This communication is in response to amendment filed 12/02/03, claims 1-8 and 14-25 have been examined as hereby set forth.

2. Acknowledgement is made to applicant's claimed the benefit of an earlier filing date under 35 U.S.C. §120 based on Application No. 09/063,335 abandoned as of 07/09/01. Applicant is urged to review the abandoned application to ascertain that contained subject matter that was essential to the rejection and is carried over into the continuation-in-part. A prior application does not satisfy the written description requirement of 35 U.S.C. 112, first paragraph, under 35 U.S.C. §120 and is not entitled to benefit of the earlier filing date (see MPEP 2127).

3. Claim 16 recites the limitation "said plurality of computational servers" in third line of the claim. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8 and 14-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over NARENDRAN et. al U.S. Patent No. 6,070,191 (hereafter Narendran) in view of SWE: Toward a scalable WWW server on multi-computers, Andersen et. al., Dept. of Computer Science, Univ. of California, 1996, pages 1-7 (Andersen hereafter).

Regarding claim 1, Narendran teaches substantial features of the invention as claimed, including a client (col 3/lines 39-51), a first server (14) (col 3/lines 60-61) and a plurality of servers ($S_1 \dots S_N$) (col 3/lines 57-62, col 4/lines 17-19);

initiating a connection between a client unit and a first server (col 10/lines 41-44 or col 3/lines 63-64);

determining at said first server a location of a service ("session") on one of said plurality of servers (col 4/lines 44-55, col 6/lines 18-21 or col 15/lines 14-17); and

redirecting said client unit via said first server to a second server having said service ("session") (col 18/lines 38-42, 54-57, col 4/lines 19-21 or col 15/lines 14-25);

exchanging information between a first server and a plurality of servers (col 15/lines 35-col 16/line 5); however Narendran does not explicitly teach where information is exchange particularly between the plurality of servers;

Andersen teaches a plurality of server exchanging information (page 3, left column paragraphs 2-3 and section 3.2 on page 3);

It would have been obvious to one ordinary skilled in the art at the time the invention was made given the suggestion of Narendran for having a server redirect a client to an alternate server having a request server in event of failure by configuring redirecting server with the knowledge as to where the alternate servers having request service are located, to also configure all servers having this adaptive redirecting/scheduling capability as taught by Andersen. Server configured with information exchange capabilities including periodically broadcasting network configuration information, awareness of the services present (i.e. leave or join the resource pool) in the network as well as their respective capabilities and current load. One ordinary skilled would be motivate to enhance Narendran's system with the scalability, fault tolerant and load balancing implementations of the prior art also utilizing server-client redirection mechanisms.

Regarding claim 2, wherein said initiating comprises: said client unit broadcasting a message to a domain of server comprising said plurality of servers (Narendran: col 4/lines 10-12), and said first server responding to said message (Narendran: col 14/lines 48-51 or 15/lines 14-25).

Regarding claim 3, wherein said initiating is in response to a prior server failing (col 12/lines 12-65).

Regarding claim 4, wherein said service ("session") is associated with an identifier ("token") (Narendran: col 4/lines 5-16).

Regarding claim 5, wherein said determining comprises said first server sending a message to said plurality of servers, said message comprising said token (Narendran: col 6/lines 19-26 and col 15/lines 35-col 16/line 5); and said plurality of servers responding to said first server with service information associated with said identifier (Narendran: col 6/lines 19-26 and col 15/lines 35-col 16/line 5).

Regarding claim 6, determining a most recent session from a plurality of sessions (Andersen; page 1, right column 1st paragraph).

Regarding claim 7, securing messages between said client unit and said plurality of servers (Andersen: page 4, left column section 3.1, item 1).

Regarding claim 8, wherein said securing is performed with a keyed hash signature.

Official Notice (see MPEP § 2144.03 Reliance on "Well Known" Prior Art) is taken that keyed hash signature was old and well known in the Data Processing art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include this feature because it is a common authentication scheme which employs authentication tokens to improved security system against eavesdropping, dictionary attacks, and intrusion into stored password lists.

Claims 9-13 (Cancelled).

Regarding claim 14, wherein said session comprises a plurality of services and wherein said first and second servers can each provide said plurality of services (Narendran: col 4/lines 44-55, col 14/lines 57-59).

Regarding claim 15, wherein said plurality of services comprise information ("state maintenances") for a user of said client unit (Narendran: col 4/lines 5-11).

Regarding claim 16, this claim includes a limitation substantially the same as discussed on claim 15 wherein service are now called computational services, same rationale of rejection is applicable; and further redirecting said client unit via said first server to a second server having said session, thereby removing a plurality of computational services from said client unit "(Narendran: col 18/lines 38-42, 54-57, col 4/lines 19-21 or col 15/lines 14-25).

Regarding claim 17, wherein said information exchanged between said plurality of servers comprises a description of a information regarding devices or the presence of devices on the network also called network configuration (i.e. network topology) of said plurality of servers (Narendran: col 6/lines 19-21 or Andersen: page 1, right column, 1st paragraph and page 3, left column 3rd paragraph).

Regarding claim 18, updating status in said network topology on a relationship between a connectivity of said client unit and said second server (Andresen: page 2, right column 2nd paragraph, page 3, left column, 3rd paragraph).

Regarding claim 19, this limitation is substantially the same as redirecting limitation on claim 1, same rationale of rejection is applicable.

Regarding claims 20 and 23, wherein said client unit comprises a ("thin client unit" and "thin client session" and a "stateless device") i.e. a computing device (Narendran: col 3/lines 49-56).

Regarding claim 21, wherein said session comprises a service ("thin client session") that services client's request (Narendran: abstract).

Regarding claim 22, maintaining said service "session" persistently by said plurality of servers, i.e. stored or cached (Narendran: col 4/lines 26-29).

Regarding claim 24, wherein said determining said location at said first server of said session on one of said plurality of servers comprises receiving a message from said second server of an availability of said second server for having said session (Narendran: directory of services see col 15/lines 61-col 16/line 5).

Regarding claim 25, wherein said token can identify a plurality of sessions (Narendran: col 4/line 10-15).

Citation of Pertinent Art:

The following prior art made of record and not relied upon are considered pertinent to applicant's disclosure. Copies of documents cited will be provided as set forth in MPEP § 707.05(a):

WO 97/15885 (05-1997)

Ellis teaches initiating a connection between a client and a server, determining at said server a location of a service ("session") on one of a plurality of servers and redirecting said client via said server to said one of a plurality of servers, said service or session is associated with a token (pages 14-15).

U.S. Patent No. 5,633,999

Crowles et. al. teaches establishing a connection between a multiplicity of client workstations and a primary server for a requested service; wherein the primary server and a backup server implement data synchronization by which the primary server and backup server exchange information, and where the client workstation is redirected via the primary server to a backup server having the service requested by the client workstation

U.S. 5,987,621 (Nov 1999)

Duso et. al. teaches exchanging communication between a plurality of servers which periodically send information to each other; initiating a connection between a client computer and a first server from among the plurality of server for requested service, wherein upon the detection of failure on said first server, redirecting said client computer to a second server having said requested service.

U.S. Patent No. 5,491,752 (Feb. 1996) (Copy was previously provided)

Kaufman et. al. teaches a system for increasing the difficulty of password guessing attacks in a distributed authentication scheme employing authentication tokens; wherein an improved security system inhibits eavesdropping, dictionary attacks, and intrusion into stored password lists. A hash algorithm is performed on the password and token of a workstation and send to a server which services are desired, the server validates and if legit, the user is granted access to the desired computing system. Accordingly, the server sends the workstation a message encrypted using a secret key that comprises a session code computed by applying a second cryptographically secure hashing algorithm to the password and token. The workstation may use the message (1) as a "ticket" to gain access to the desired system for a selected period of time, or (2) as a session-specific shared secret key to encrypt and decrypt subsequent communications with the desired computing system (abstract, col 7/lines 35-49).

Lotus Domino Advanced Services: High Availability, Smelser, C., LDD Today, Jan 1997, p 1-5.

Smelser discloses the clustering of servers to provided high availability in event of a server failure, wherein in to support the availability of alternate secondary servers to provide the same service to a client that was provided by a first server, all server forming the cluster of servers must exchange information between them maintaining data/service synchronization.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (703) 305-0750. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Jack B. Harvey can be reached on (703) 305-9705. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to the Central Fax Office:

(703) 872-9306, for Official communications and entry;

Or Telephone:

(703) 306-5631 for TC 2100 Customer Service Office.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Fourth Floor (Receptionist), further ensuring that a receipt is provided stamped "TC 2100".



B. Prieto
TC 2100
Patent Examiner
February 14, 2004